EFS ID: 2269860
Application No.: 10/150,951

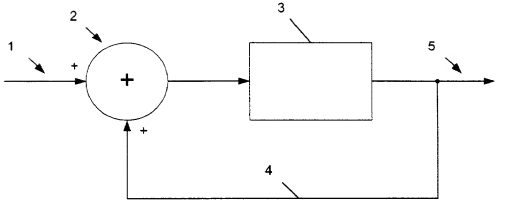

FIGURE 1A

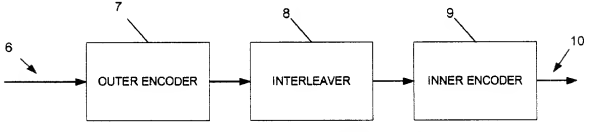

FIGURE 1B

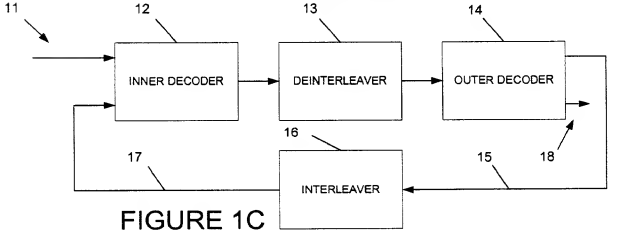

FIGURE 1C

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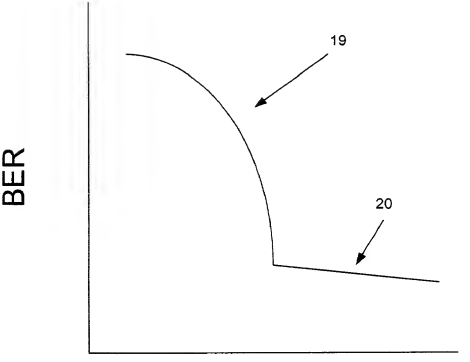

FIGURE 2

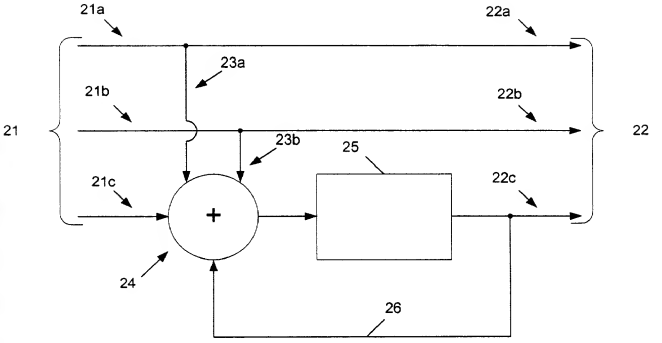

FIGURE 3A

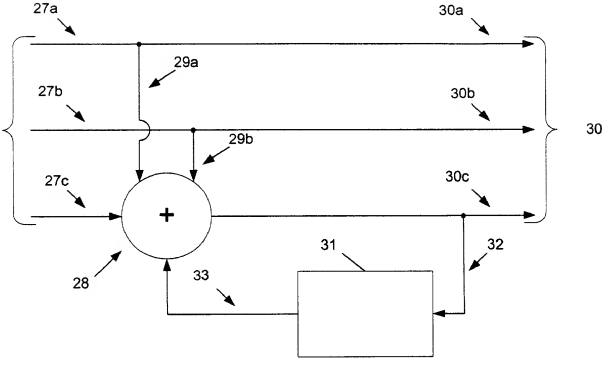

FIGURE 3B

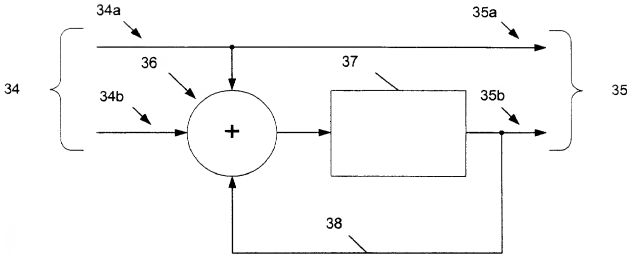

FIGURE 4

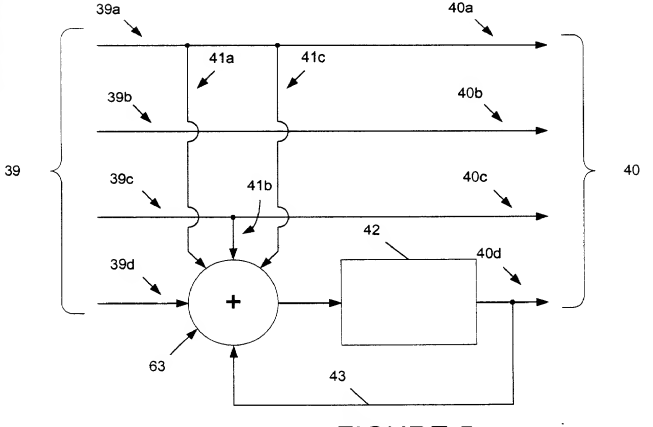

FIGURE 5

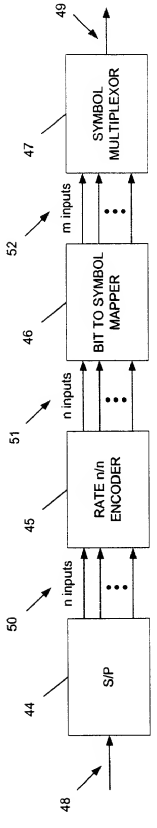

FIGURE 6

Intel 2010 - 7 of 8860

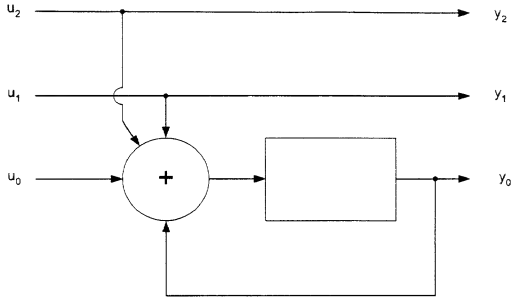

FIGURE 7A

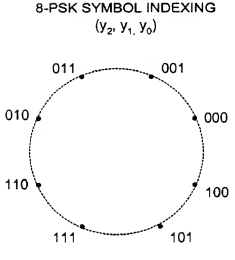

FIGURE 7B

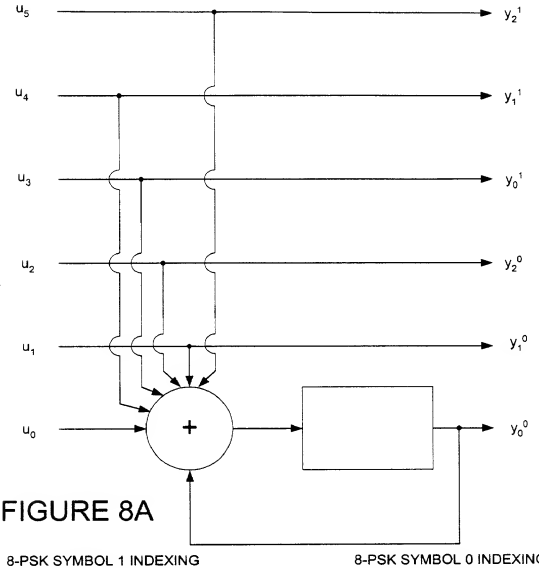

FIGURE 8A

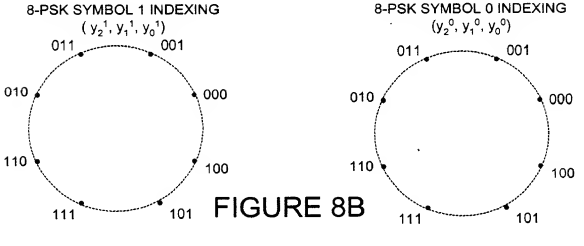

FIGURE 8B

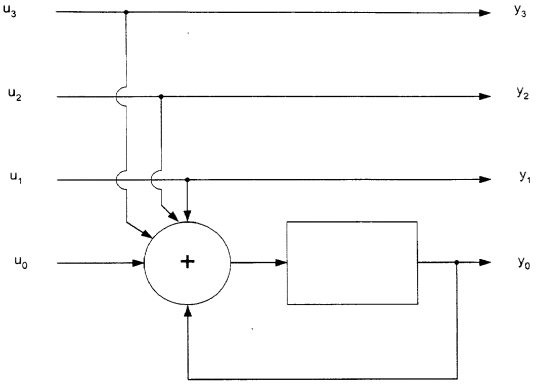

FIGURE 9A

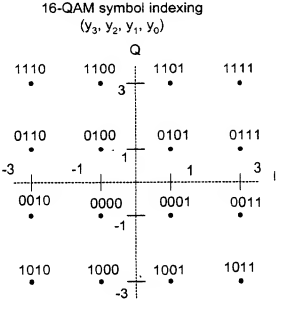

FIGURE 9B

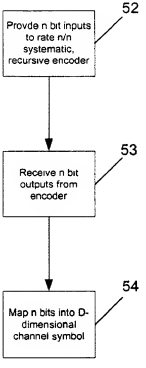
52
Provde n bit inputs to rate n/n systematic, recursive encoder
53
Receive n bit outputs from encoder
54
Map n bits into D-dimensional channel symbol

FIGURE 10

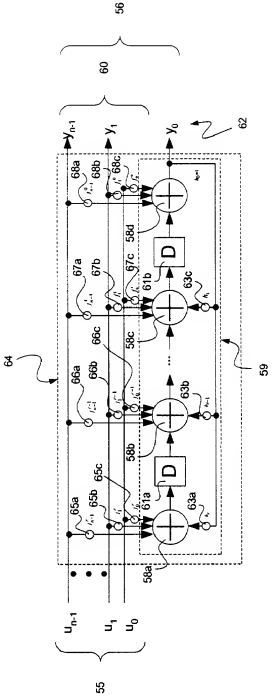

FIGURE 11A

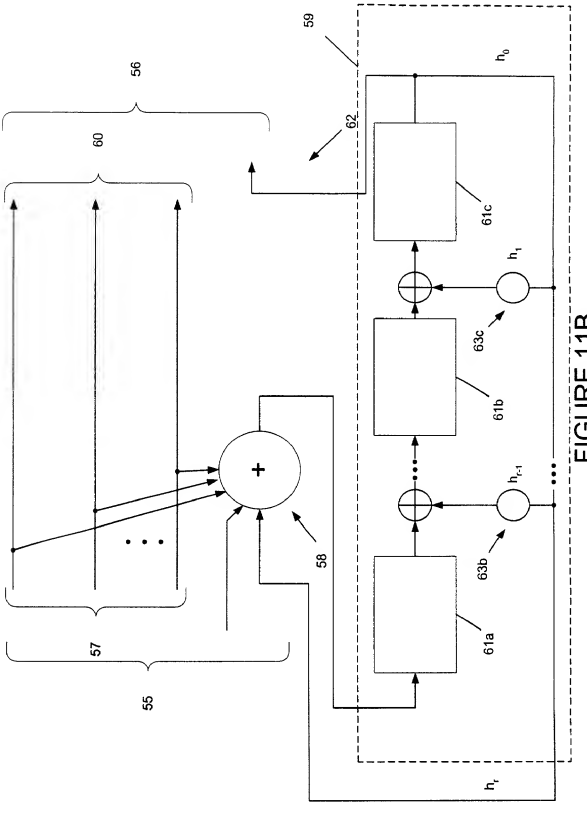

FIGURE 11B

DOCKET ALARM

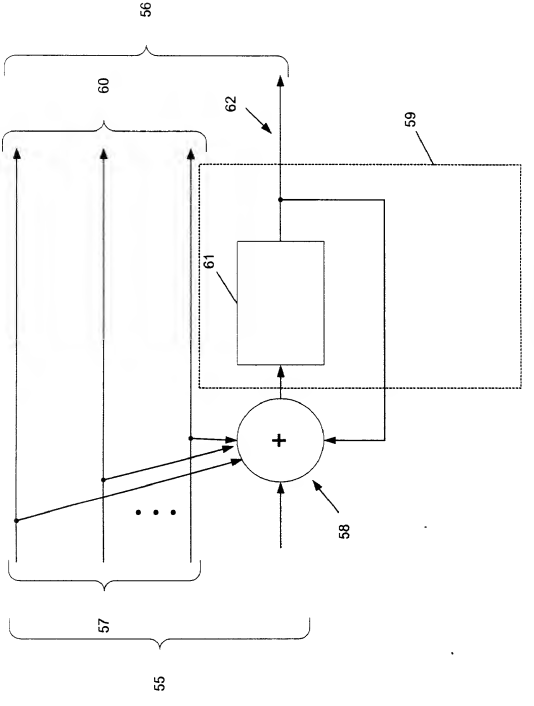

FIGURE 11C

09828277 .062101

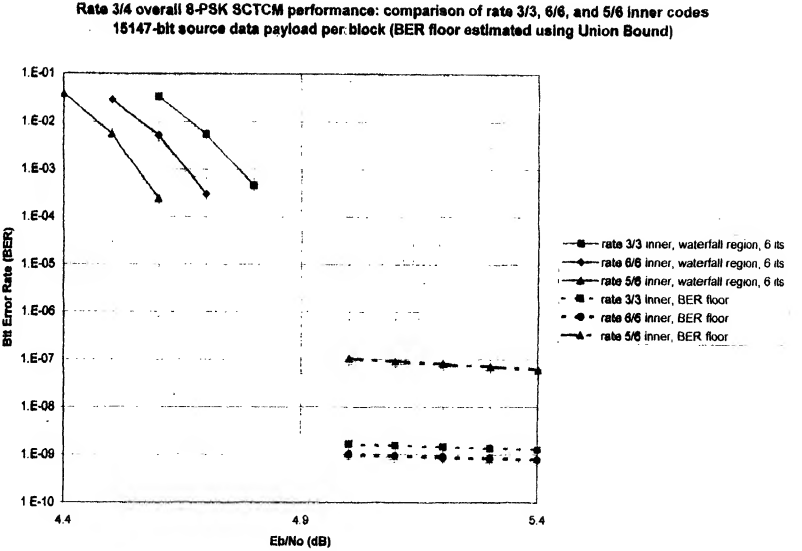

FIGURE 12A

TOT290'27878860

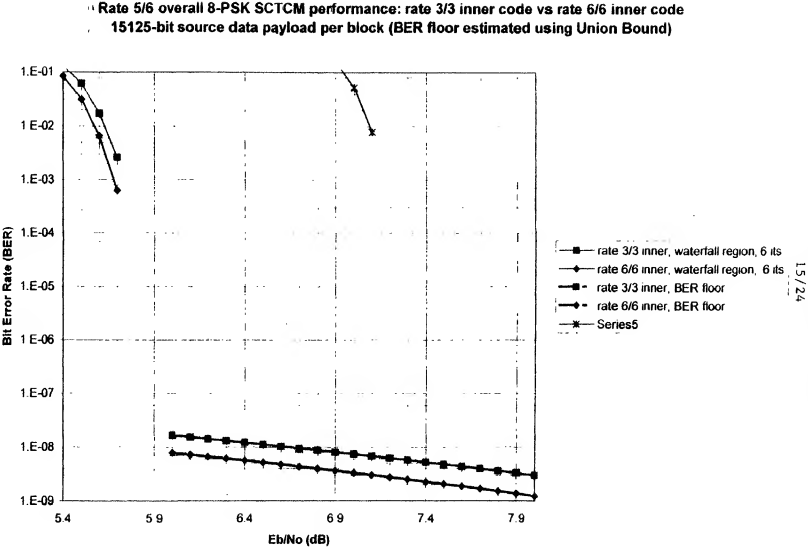

FIGURE 12B

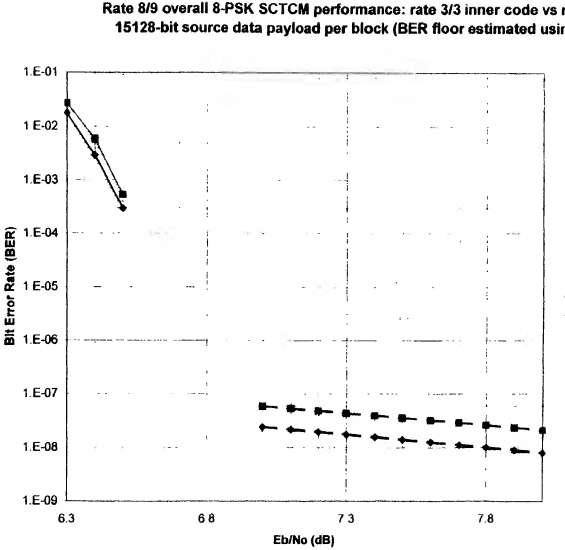
Rate 8/9 overall 8-PSK SCTCM performance: rate 3/3 inner code vs rate 6/6 inner code
15128-bit source data payload per block (BER floor estimated using Union Bound)
Bit Error Rate (BER)
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
1.E-06
1.E-07
1.E-08
1.E-09
6.3
6.8
7.3
7.8
Eb/No (dB)
rate 3/3 inner, waterfall region, 6 its
rate 6/6 inner, waterfall region, 6 its
rate 3/3 inner, BER floor
rate 6/6 inner, BER floor

FIGURE 12C

TOT290 '27878960

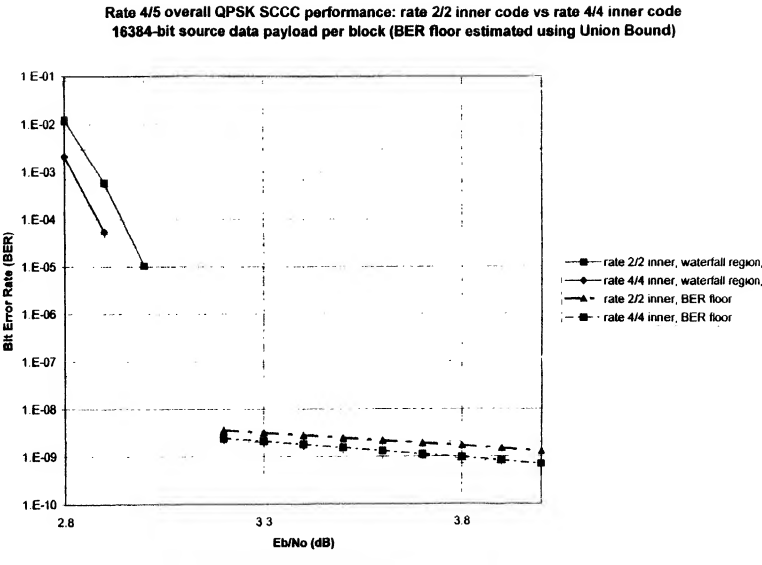

FIGURE 12D

09887627 .0621.01

Rate 2/3 Overall Waterfall Comparisons

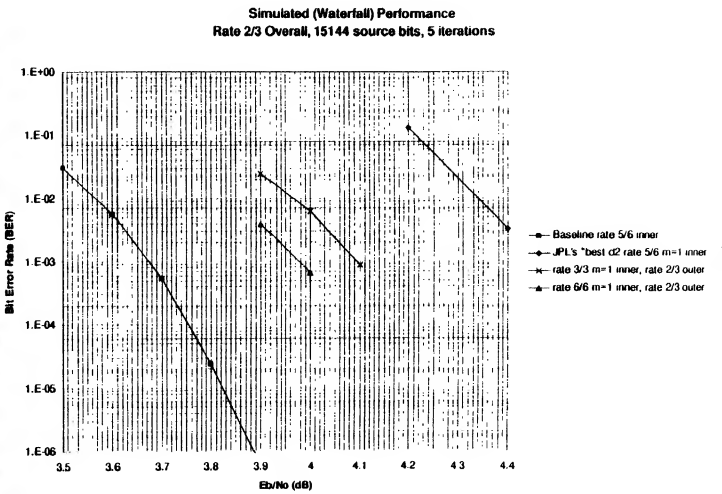

FIGURE 13A

CONEXANT

Rate 5/6 Overall Waterfall Comparisons

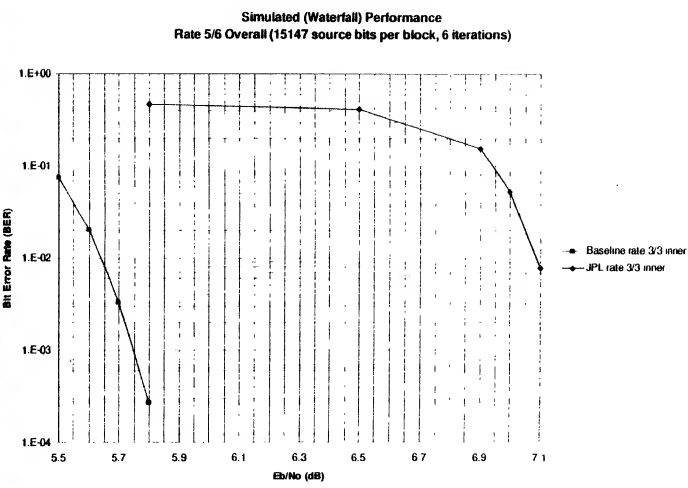

FIGURE 13B

CONEXANT

Rate 3/3 vs Rate 6/6 Codes

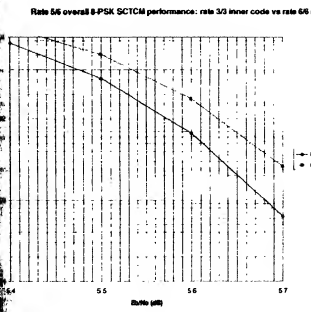

FIGURE 13C

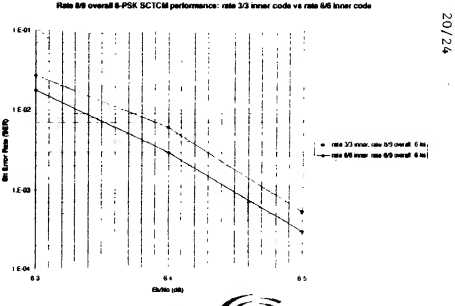

FIGURE 13D

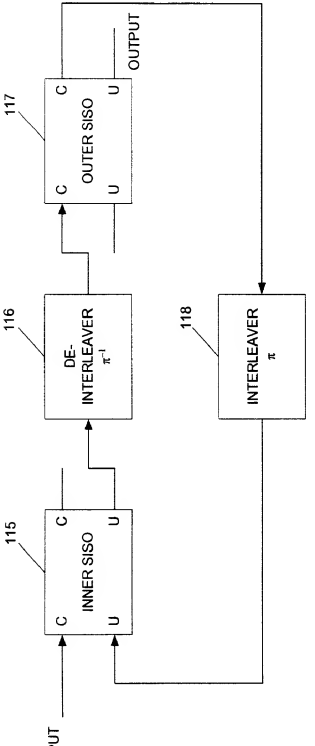
INPUT
115
INNER SISO
C
U
C
U
116
DE-
INTERLEAVER
π^{-1}
118
INTERLEAVER
π
117
OUTER SISO
C
U
C
U
OUTPUT

FIGURE 14

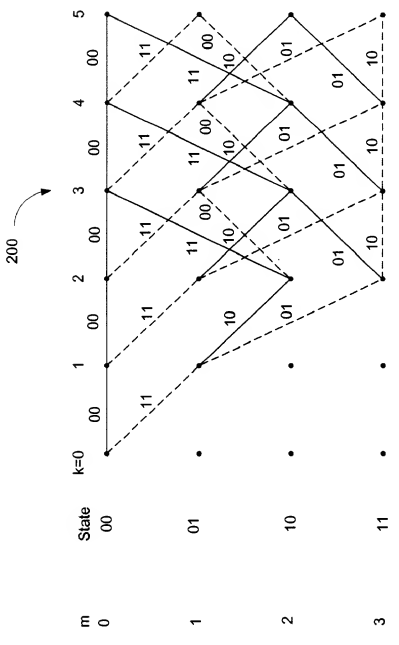

FIGURE 15

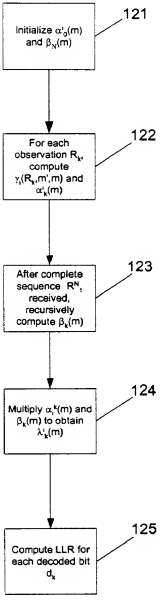
Initialize $\alpha^*_0(m)$ and $\beta_N(m)$
121
For each observation R_k, compute $\gamma_k(R_k,m',m)$ and $\alpha^*_k(m)$
122
After complete sequence R^N_1 received, recursivelly compute $\beta_k(m)$
123
Multiply $\alpha^*_k(m)$ and $\beta_k(m)$ to obtain $\lambda^*_k(m)$
124
Compute LLR for each decoded bit d_k
125

FIGURE 16

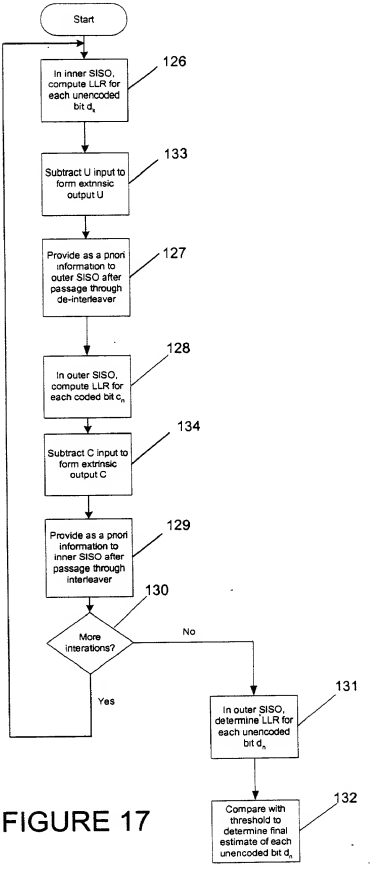
Start
In inner SISO, compute LLR for each unencoded bit d_k
126
Subtract U input to form extrinsic output U
133
Provide as a priori information to outer SISO after passage through de-interleaver
127
In outer SISO, compute LLR for each coded bit c_n
128
Subtract C input to form extrinsic output C
134
Provide as a priori information to inner SISO after passage through interleaver
129
More iterations?
130
No
Yes
In outer SISO, determine LLR for each unencoded bit d_k
131
Compare with threshold to determine final estimate of each unencoded bit d_k
132

FIGURE 17